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ABSTRACT OF THE DISCLOSURE

A truck deck turntable includes a base having a first end, a second end and a track that extends from the second end inwardly toward the first end. A carriage is movable along the track. The carriage has a first position toward the first end of the base and a second position toward the second end of the base. A turntable is rotatably mounted to the carriage.

TITLE OF THE INVENTION:

truck deck turntable

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NAME OF INVENTOR:

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FIELD OF THE INVENTION

The present invention relates to a truck deck turntable and, in particular, one intended for use when loading and unloading, snowmobiles, all-terrain vehicles and the like.

BACKGROUND OF THE INVENTION

20 Rotatable turntables for use with snowmobiles are known. Canadian Patent 956,180 which issued to Merrick in 1974, discloses an invention entitled "Ramp and Turntable for Snowmobiles". In setting forth background information as to problems encountered with snowmobiles, Merrick stated that "in 25 the absence of a reverse gear they must be turned around manually whenever there is not enough room to drive them forward in a wide arc". The stated object of the Merrick reference was, therefore, to "provide a turntable and ramp which can be used to turn a snowmobile around in a confined 30 area, such as a garage". United States Patent 3,945,521 subsequently issued to Decker in 1976 for an invention entitled "Rotatable Trailer". The Decker reference teaches how a turntable can be mounted onto a tilttable trailer.

35 Pickup trucks are now being used for recreational purposes, in preference to trailers, for a number of reasons. Generally, people are driving smaller cars, that are incapable

of pulling trailers. It is viewed as preferable to maintain a single vehicle, namely a truck; rather than both a car and a trailer. Trucks are viewed as providing improved load security and manoeuvrability, when compared to pulling a 5 trailer. Trucks have a wider range of uses and can serve as a commuter vehicle, whereas trailers often end up being stored between uses.

The teachings of the Merrick reference and the Decker 10 reference, however, are not of assistance when transporting snowmobiles by truck. When a turntable is mounted on a trailer, there is sufficient clearance to rotate the turntable. However, when the same turntable is mounted on a truck deck, the cab and cargo box of the truck provide restrictions which 15 prevent the turntable from rotating.

SUMMARY OF THE INVENTION

20 What is required is a truck deck turntable that can operate notwithstanding the obvious restriction upon clearance provided by the cab of the truck.

According to one aspect of the present invention there is 25 provided a truck deck turntable which includes a base having a first end, a second end and a track that extends from the second end inwardly toward the first end. A carriage is movable along the track. The carriage has a first position toward the first end of the base and a second position toward 30 the second end of the base. A turntable is rotatably mounted to the carriage.

With the truck deck turntable, as described above, clearance is provided for the rotation of the turntable when 35 the carriage is in the second position.

According to another aspect of the invention there is

provided the truck deck turntable, as described above, in combination with a truck having cab with a deck disposed immediately behind the cab. The base is secured to the deck of the truck, with the first end of the base positioned 5 immediately adjacent to the cab and the second end of the base being spaced from the cab.

BRIEF DESCRIPTION OF THE DRAWINGS

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These and other features of the invention will become more apparent from the following description in which reference is made to the appended drawings, wherein:

FIGURE 1 is a side elevation view of a truck deck 15 turntable in constructed in accordance with the teachings of the present invention installed on a truck deck and positioned in a first position.

FIGURE 2 is a top plan view of the truck deck turntable illustrated in FIGURE 1.

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FIGURE 3 is a side elevation view of a truck deck turntable in constructed in accordance with the teachings of the present invention installed on a truck deck and positioned in a second position.

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FIGURE 4 is a top plan view of the truck deck turntable illustrated in FIGURE 3.

FIGURE 5 is a top plan view of the truck deck turntable illustrated in FIGURE 4, showing the truck deck turntable in mid-rotation.

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FIGURE 6 is a rear elevation view of the truck deck turntable illustrated in FIGURE 1.

FIGURE 7 is an exploded perspective view of the truck deck turntable illustrated in FIGURE 1.

FIGURE 8 is a bottom plan view of the truck deck turntable illustrated in FIGURE 1.

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FIGURE 9 is a detailed section view of the truck deck turntable illustrated in FIGURE 1.

FIGURE 10 is a side elevation view of the truck deck turntable illustrated in **FIGURE 1**, with ramps deployed in an unloading position.

5 **FIGURE 11** is a detailed section view of a first locking mechanism that prevents rotation of the truck deck turntable illustrated in **FIGURE 1**.

FIGURE 12 is a detailed section view of a second locking mechanism that prevents rotation of the truck deck turntable illustrated in **FIGURE 1**.

10 **FIGURE 13** is a detailed section view of a third locking mechanism that prevents movement of the carriage of the truck deck turntable illustrated in **FIGURE 1**.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

15 The preferred embodiment, a truck deck turntable generally identified by reference numeral 12, will now be described with reference to **FIGURES 1 through 13**.

20 Referring to **FIGURES 1 through 6**, there is illustrated a pick up truck 14 having cab 16 with a deck 18 disposed immediately behind cab 16. It will be apparent from a review of **FIGURE 2**, that there is not sufficient clearance for a standard turntable to be rotated. These clearance problems can 25 be overcome, however, through the use of truck deck turntable 12.

Referring to **FIGURE 1**, truck deck turntable 12 has a base 20 which is secured to deck 18 of truck 14. Base 20 has a 30 first end 22 and a second end 24. Base 20 is made in the form of a frame structure. Referring to **FIGURE 6**, this frame structure raises the turntable, as will hereinafter be further described, above sidewalls 26 that enclose deck 18 of truck 14 forming what is generally referred to as a "truck box". 35 Referring to **FIGURE 1**, a track 28 is provided that extends from second end 24 inwardly toward first end 22. When base 20 is

secured to deck 18, first end 22 is positioned immediately adjacent to cab 16, with second end 24 being spaced from and extending away from cab 16. Referring to FIGURE 6, it is preferred that base 20 be secured to deck 18 with bolts 30.

- 5 Referring to FIGURE 9, track 28 is a "C" channel.

Referring to FIGURE 1, a carriage 32 is provided. Carriage 32 has a plurality of peripheral wheels 34. Referring to FIGURE 9, wheels 34 engage track 28 to allow carriage 32 to move along track 28. Referring to FIGURES 1 and 2, carriage 32 has a first or transport position toward first end 22 of base 20. Referring to FIGURES 3 through 5, carriage 32 has a second or rotational position toward second end 24 of base 20.

- 15 Referring to FIGURE 1, a turntable 36 is rotatably mounted to carriage 32. Referring to FIGURE 7, turntable 36 wheel-like bearing portion 38 which has a circumference 40 along which are mounted a plurality of bearing wheels 42. Wheel-like bearing portion 38 is received in a circular bearing race 44 which is secured by welding to carriage 32. A rectangular load bearing platform 46 is, in turn, secured by welding onto bearing portion 38. Referring to FIGURES 8 and 9, assist in illustrating the relationship of the described components. Referring to FIGURE 10, there is illustrated an inclined ramp storage 48 built into base 20. The primary purpose of ramp storage 48 is to store support ramps 49. Ramp storage serves a secondary function of providing some strengthening cross-bracing 48 for base 20. Load bearing platform 46 has hinged end gates 50 with pivot between a substantially vertical stored position and a downwardly inclined operative position. Support ramps 49 hook onto end gates 50 to facilitate unloading.

It is, of course, undesirable to have movement of either carriage 32 or turntable 36 when truck 14 is in motion.

- 35 Referring to FIGURE 11, a plurality of apertures 52 are provided that extend downwardly through load bearing platform 46, bearing race 44 and carriage 32. By inserting a pin 54

into aperture 52, turntable 36 can be non-rotatably locked to carriage 32 in preparation for transport. Referring to FIGURE 12, when carriage 32 is in a transport position toward first end 22 of base 20, a flange 21 from base 20 overlies load bearing deck 46. Flange 21 serves as a secondary mechanism for preventing rotation of turntable 36, and ensures that undue strain is not placed upon pins 54. Referring to FIGURE 13, movement of carriage 32 is precluded through the use of locking bars 58, that are insertable through a sleeve 60 in carriage 10 32 and through base 20. Locking bars 58 lock carriage 32 to base 20. Cotter pins 62 are inserted through apertures 64 in locking bars 58 to prevent locking bars from accidentally becoming dislodged during transport.

15 The use and operation of truck deck turntable will now be described with reference to FIGURES 1 through 13. Referring to FIGURES 1 and 2, truck deck turntable 12 is illustrated with carriage 32 in a transport position. Two all terrain vehicles 56 are illustrated as being positioned on load bearing platform 46. In order to unload all terrain vehicles 56 locking bars 58 as illustrated in FIGURE 13 are removed to enable carriage to be move along track 28. Referring to FIGURES 3 and 4, carriage 32 is then moved along track 28 to the second or rotational position. Referring to FIGURE 11, pins 54 are 20 removed in order to allow turntable 36 to rotate freely. Referring to FIGURE 5, in the second position there is sufficient clearance for load bearing platform 46 to clear cab 16 as turntable 36 rotates. Turntable 36 is rotated by pushing against load bearing platform 46. When a force is exerted 25 laterally upon load bearing platform 46, bearing portion 38 which is secured to and underlies load bearing platform 46 moves in bearing race 44 which is secured to carriage 32. Referring to FIGURE 10, once turntable 36 is in the desired 30 rotational position, end gates 50 are lowered and ramps 49 placed in position to enable all terrain vehicles 56 to be 35 unloaded.

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It will be apparent to one skilled in the art that modifications may be made to the illustrated embodiment without departing from the spirit and scope of the invention as hereinafter defined in the Claims.

**THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE PROPERTY
OR PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:**

- 5 1.. A truck deck turntable, comprising:
 a base having a first end, a second end and a track that
 extends from the second end inwardly toward the first end;
 a carriage movable along the track, the carriage having
 a first position toward the first end of the base and a second
10 toward the first end of the base;
 a turntable rotatably mounted to the carriage; and
 a loading deck secured to the turntable.

2. In combination:

a truck having cab with a deck disposed immediately behind the cab;

5 a truck deck turntable, comprising:

a base secured to the deck of the truck, the base having a first end, a second end and a track that extends from the second end inwardly toward the first end, the first end of the base being secured to the deck immediately adjacent to the

10 cab, the second end of the base being spaced from the cab;

a carriage movable along the track, the carriage having a transport position toward the first end of the base and a rotational position toward the second end of the base;

15 a turntable rotatably mounted to the carriage, clearance being provided to rotate the turntable when the carriage is moved to the rotational position spaced from the first end of the base, and

a loading deck secured to the turntable.

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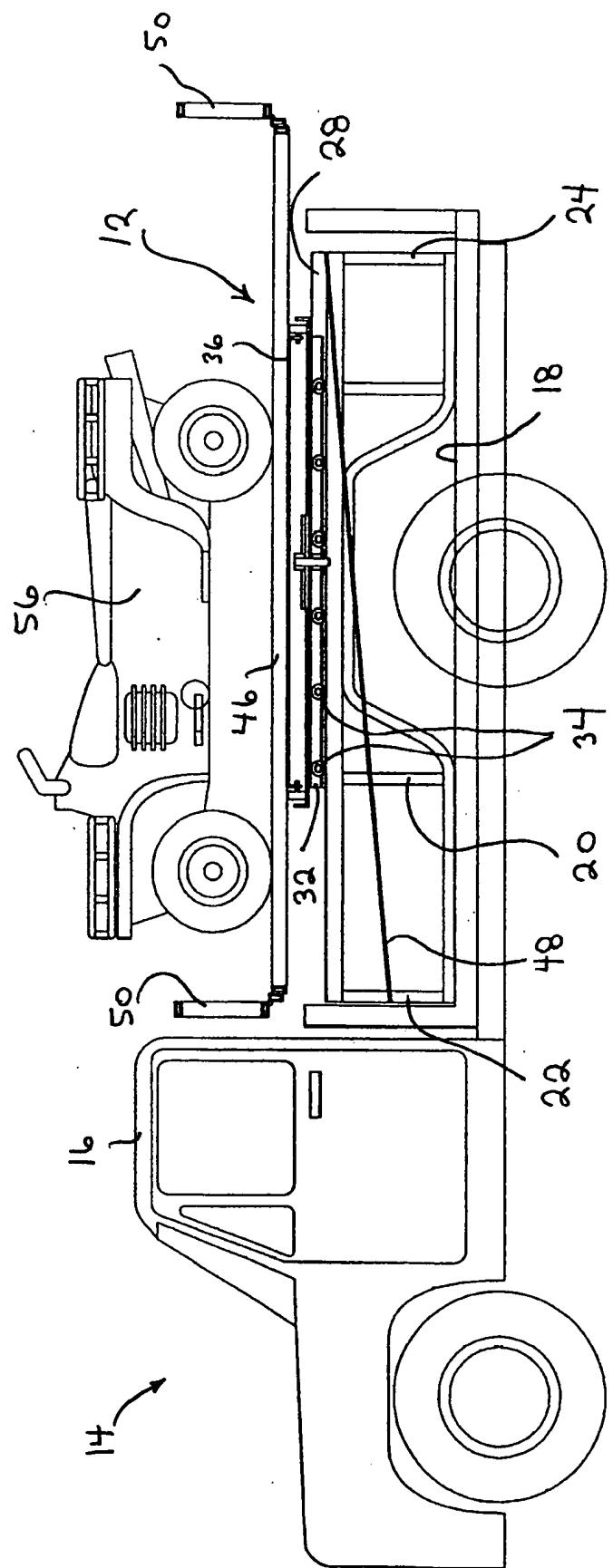


FIGURE 1

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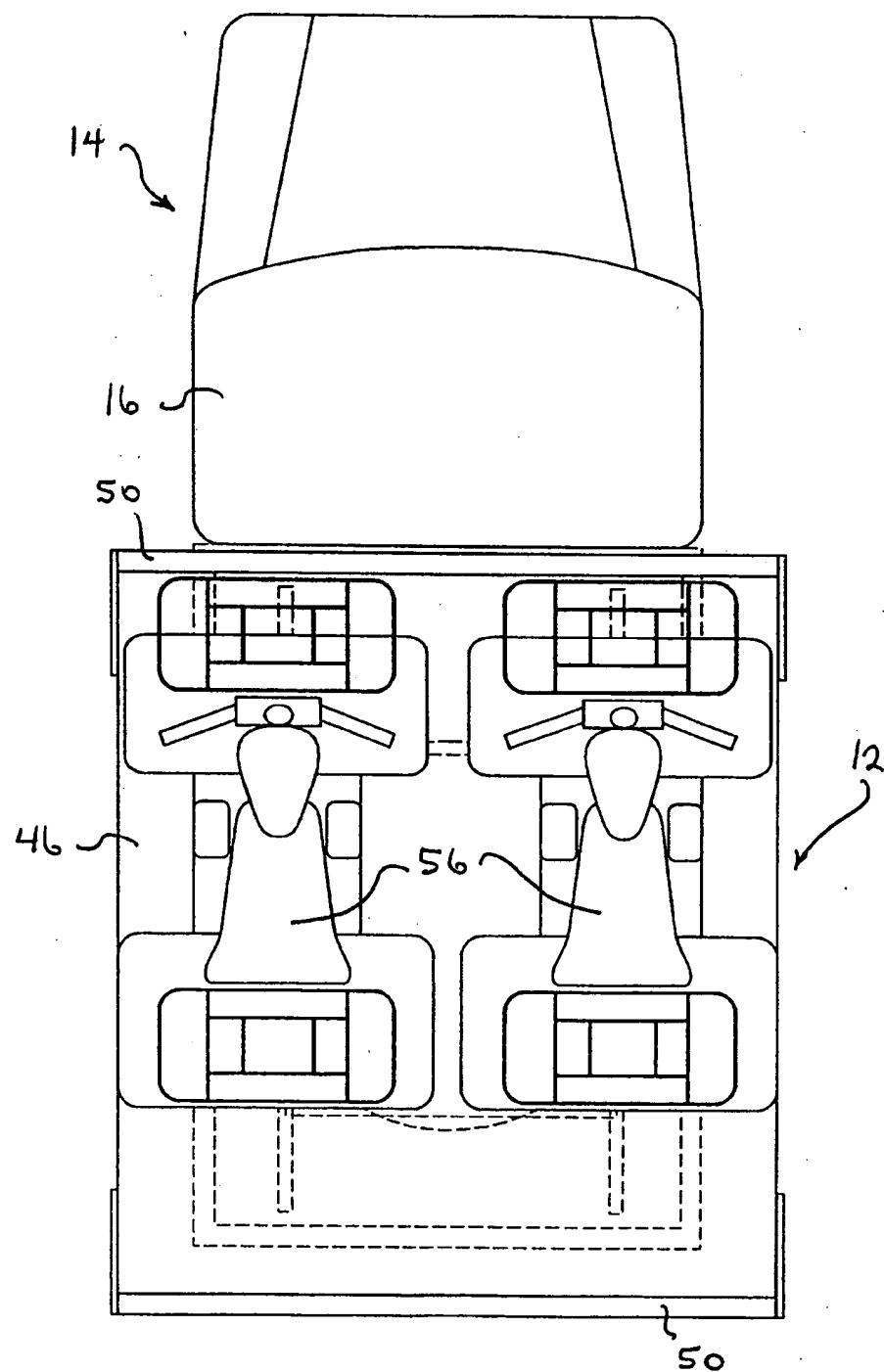


FIGURE 2

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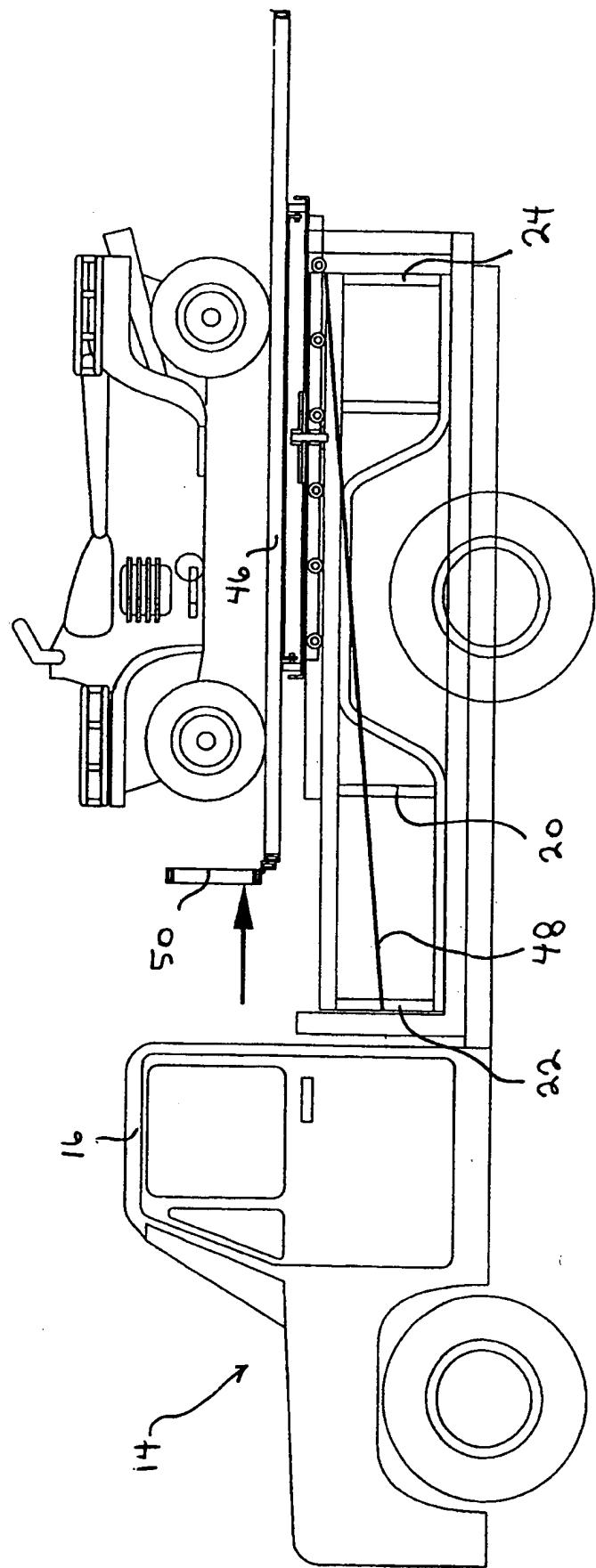


FIGURE 3

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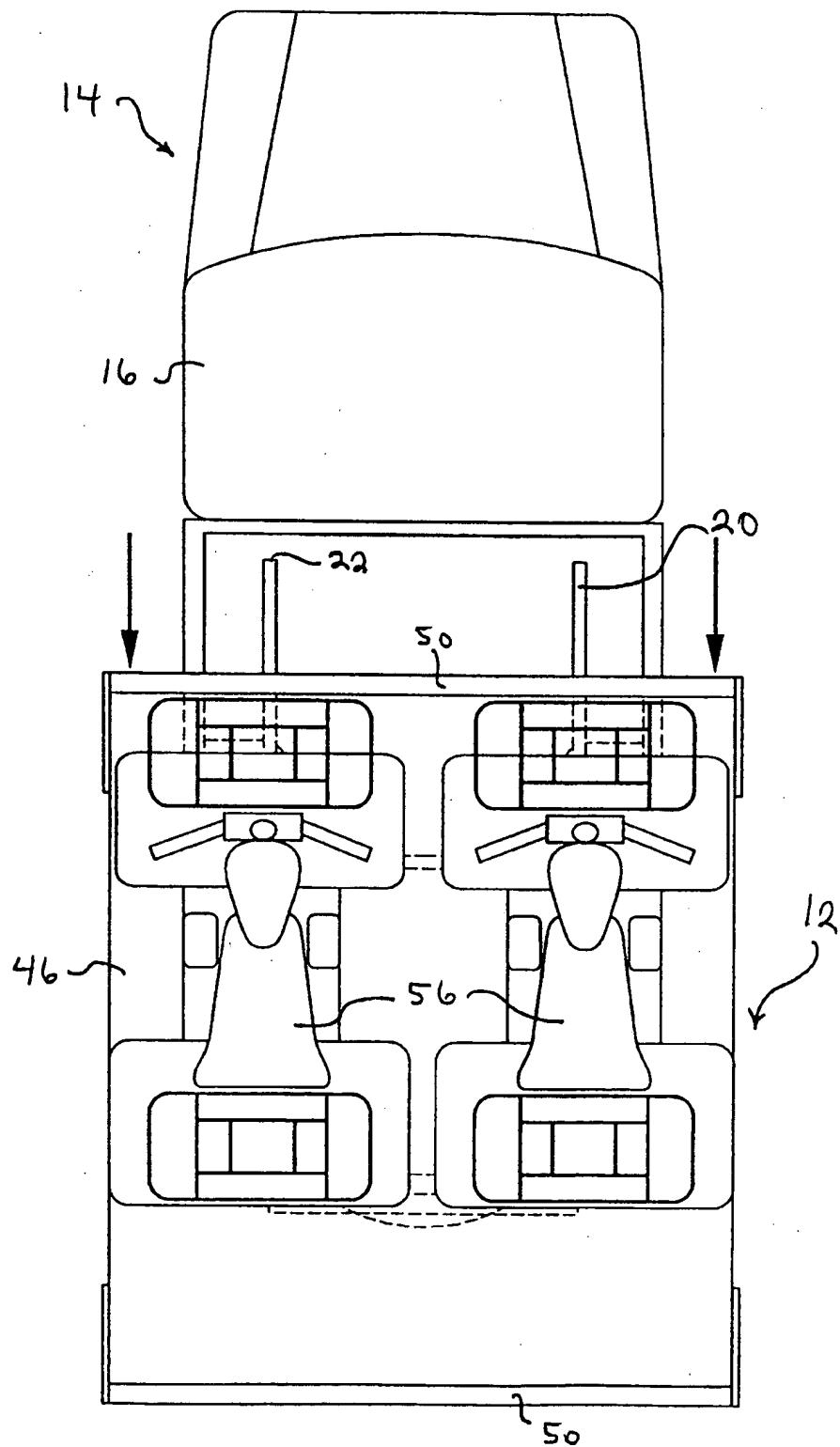


FIGURE 4

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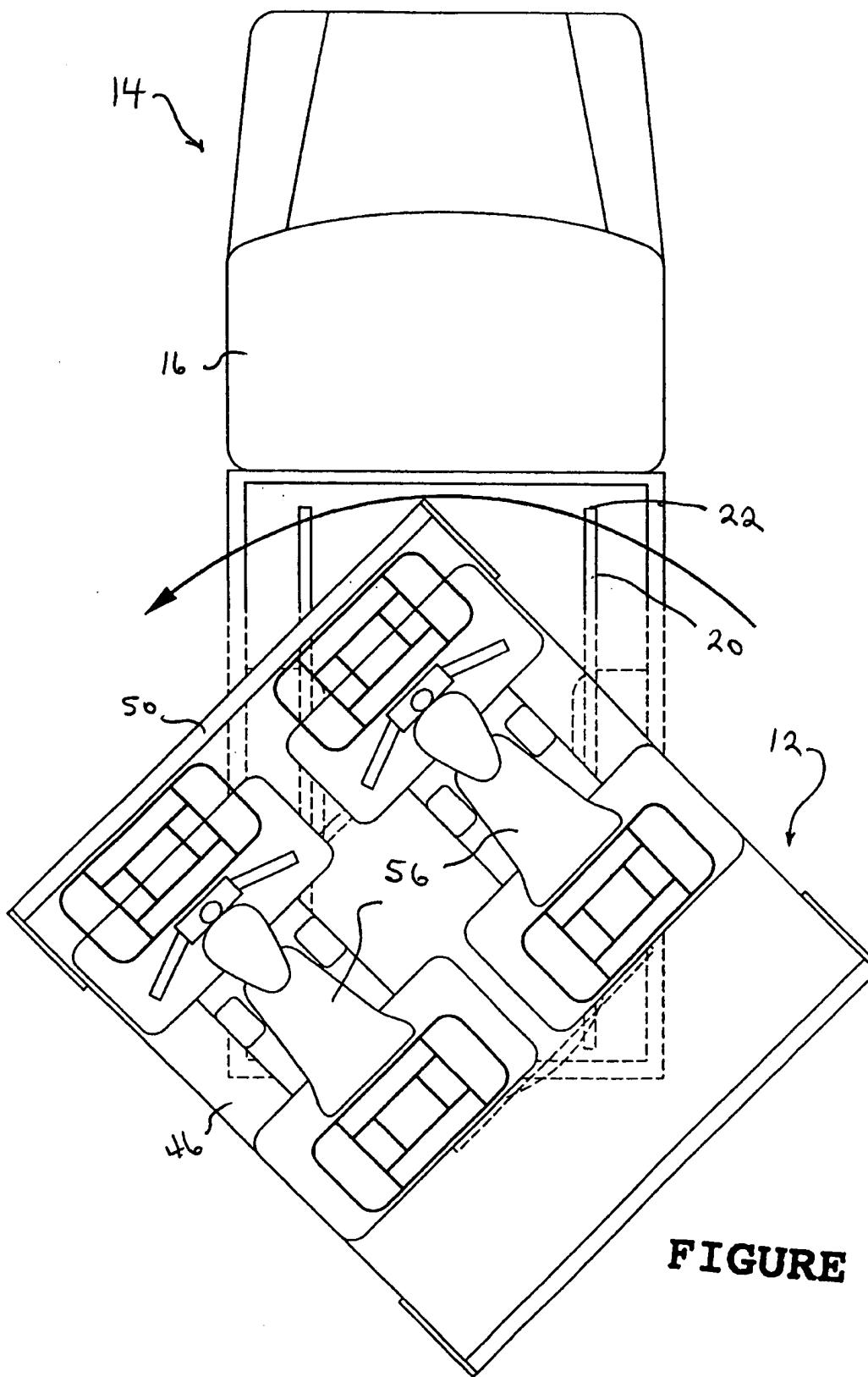


FIGURE 5

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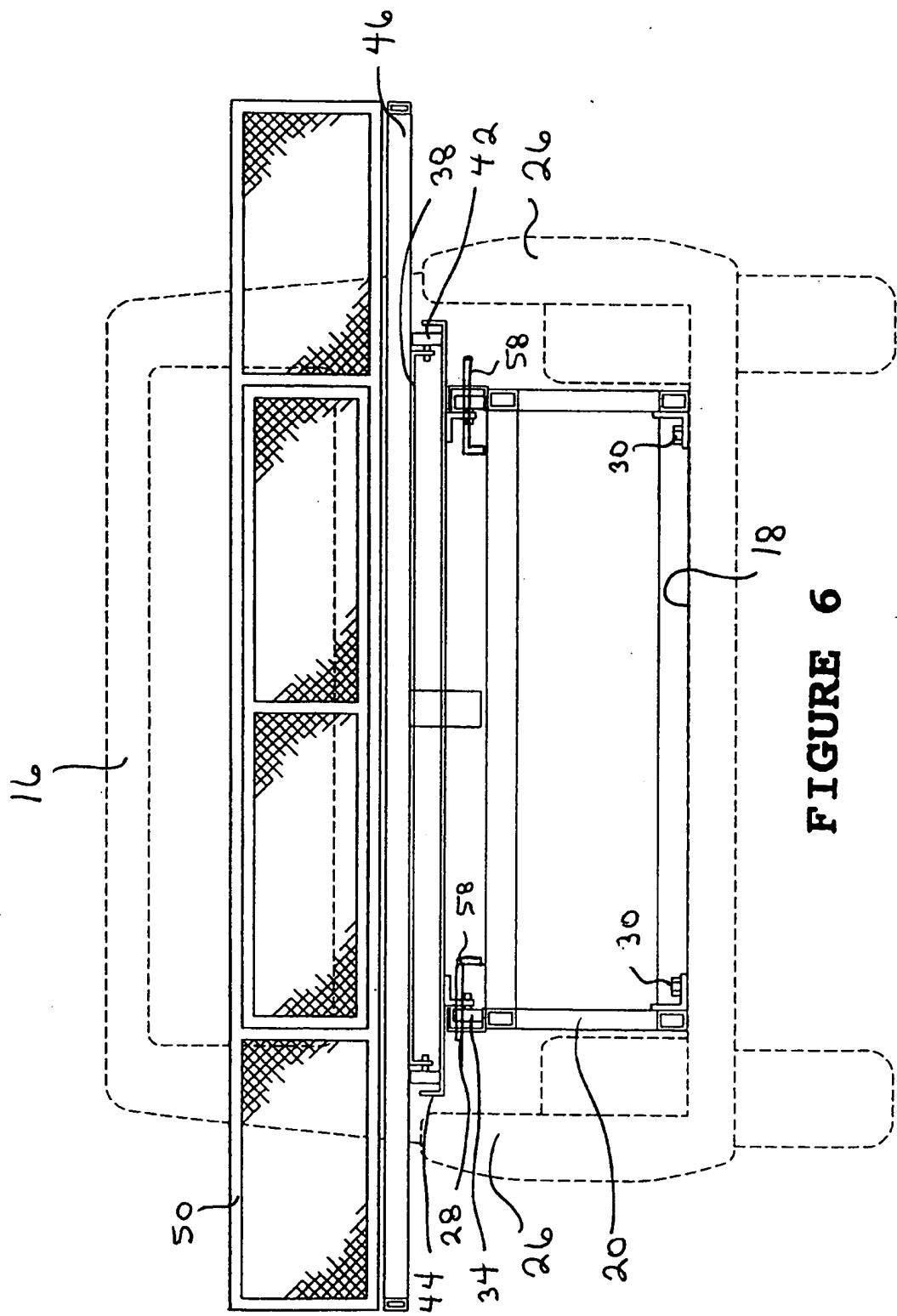


FIGURE 6

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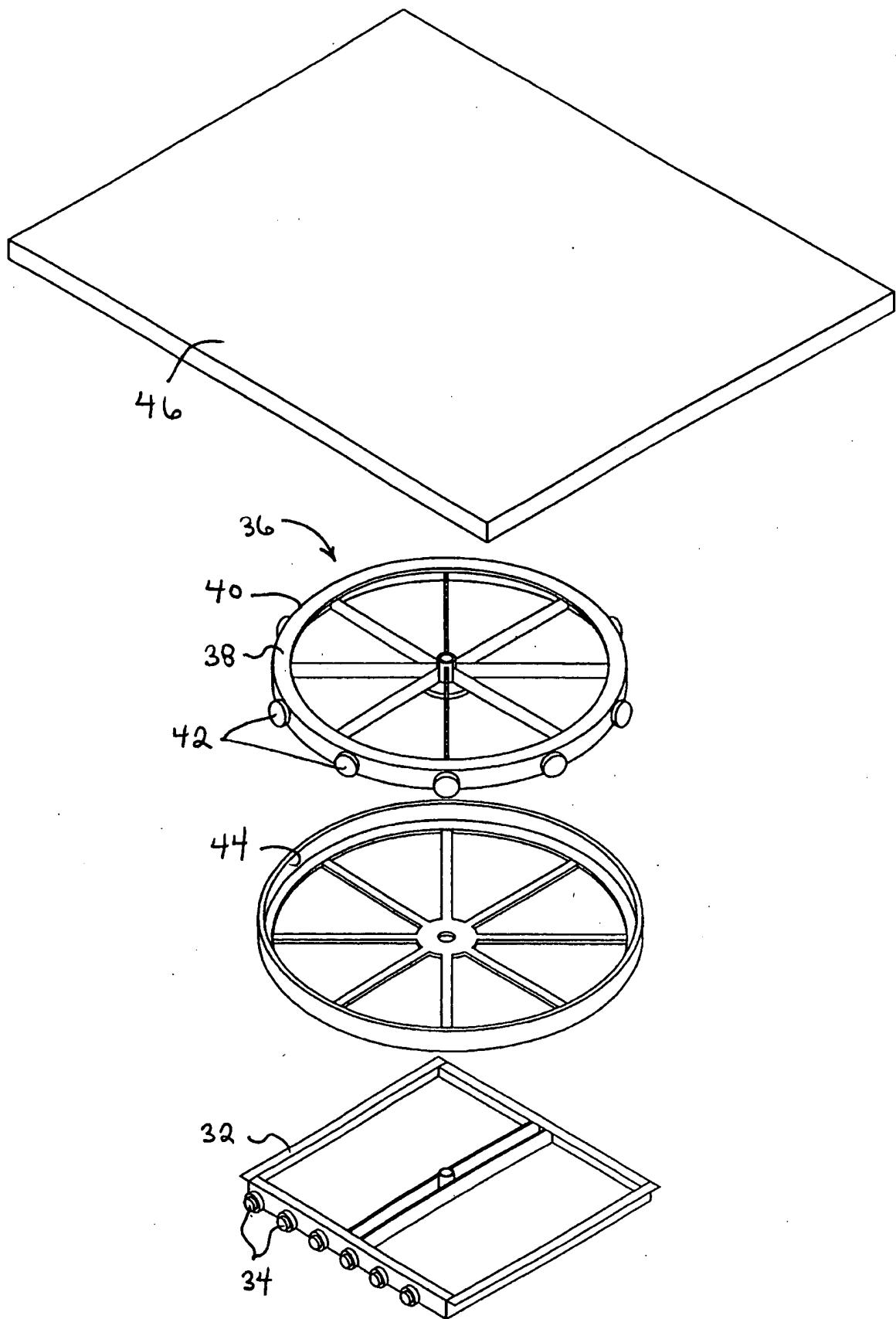
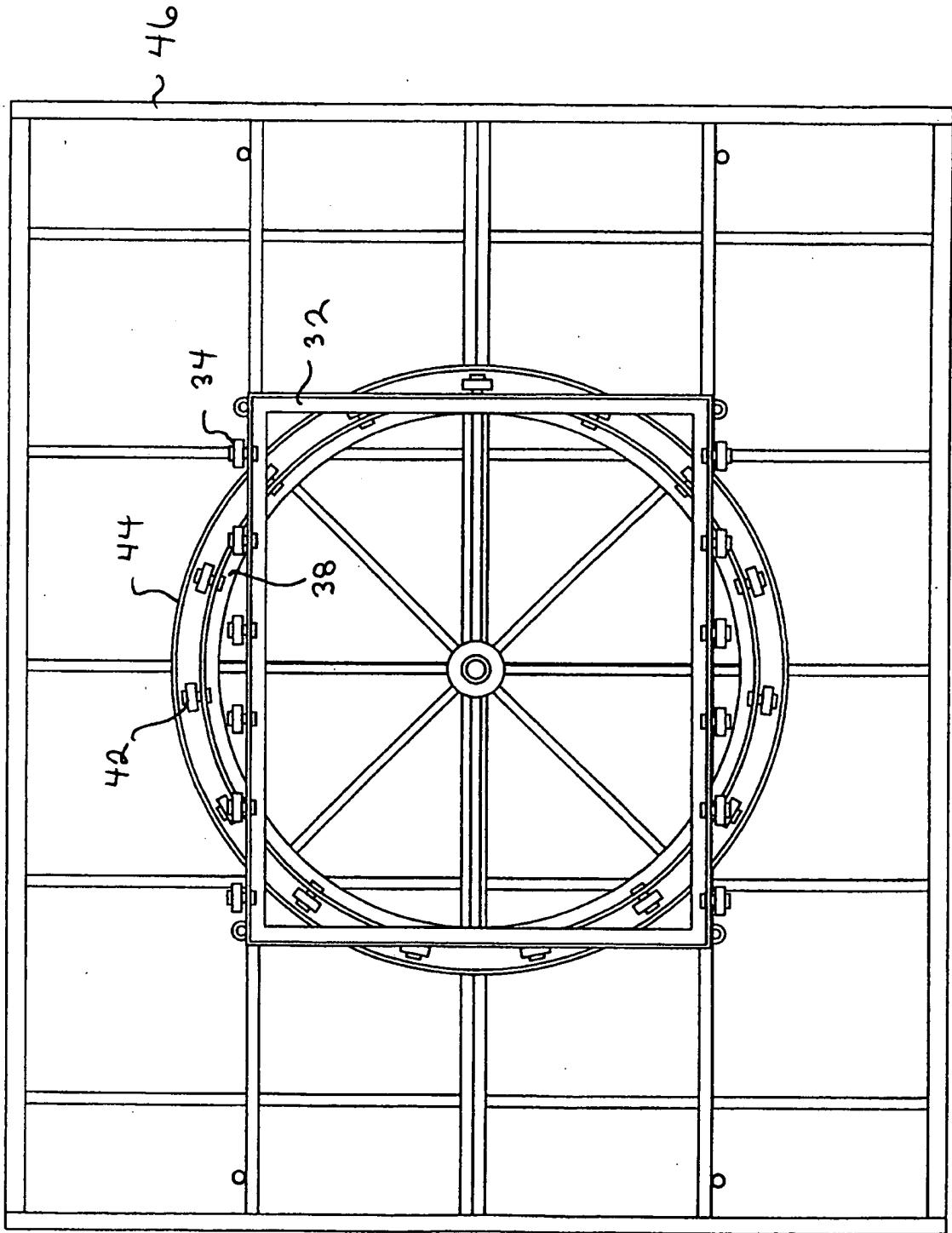


FIGURE 7

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FIGURE 8



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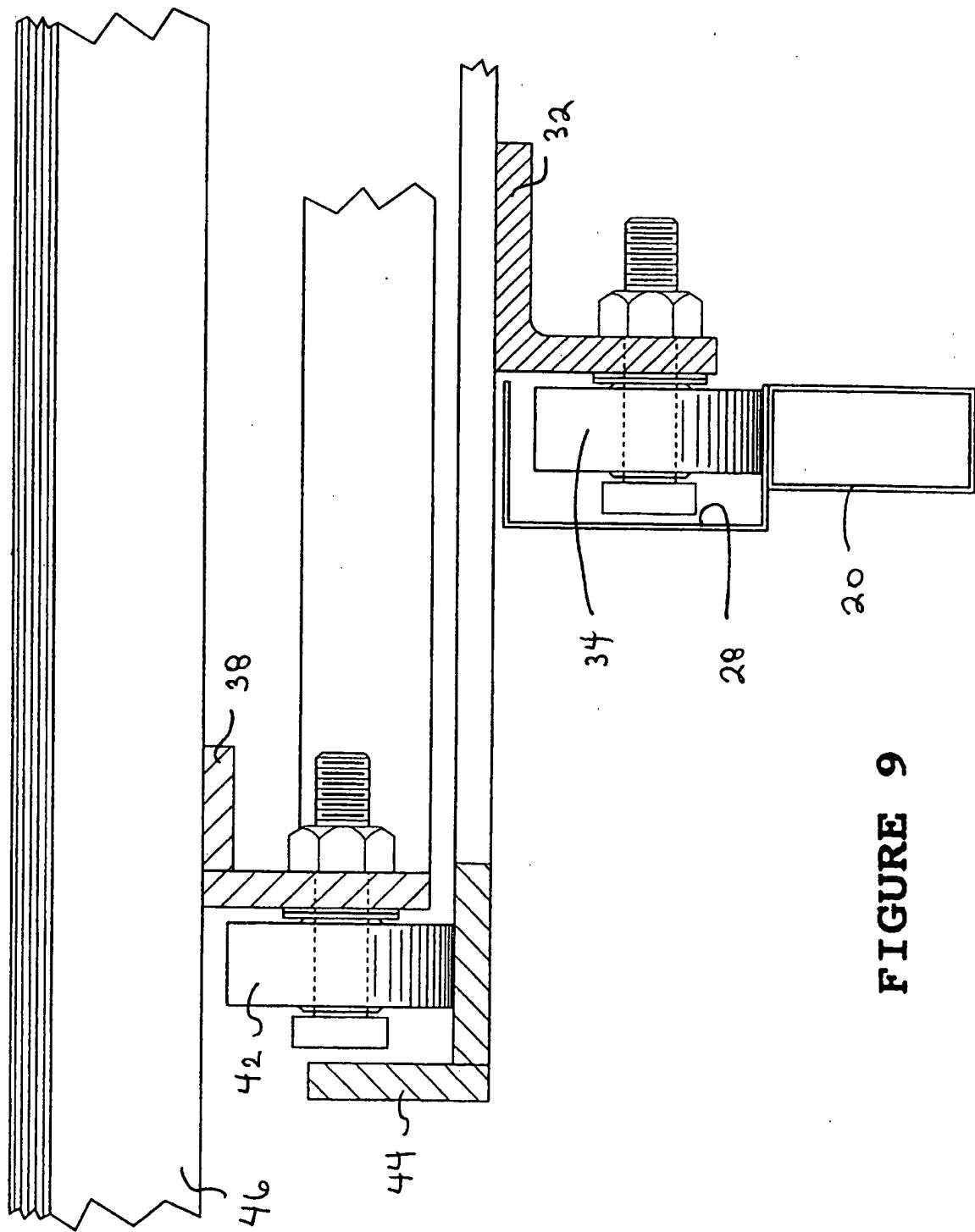


FIGURE 9

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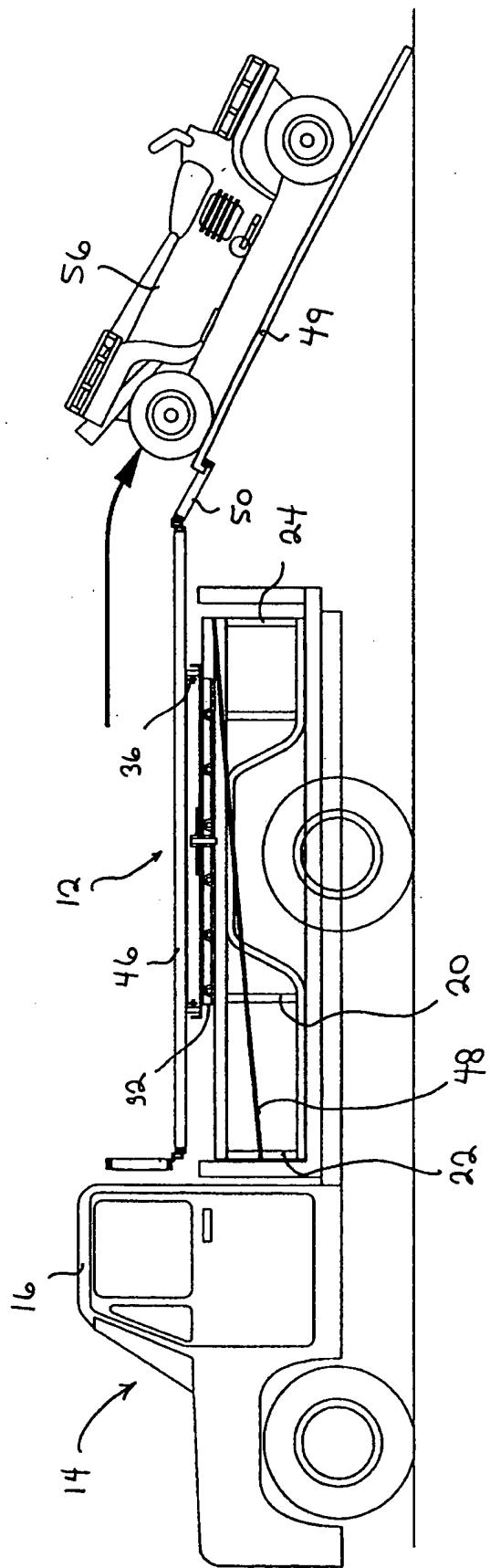


FIGURE 10

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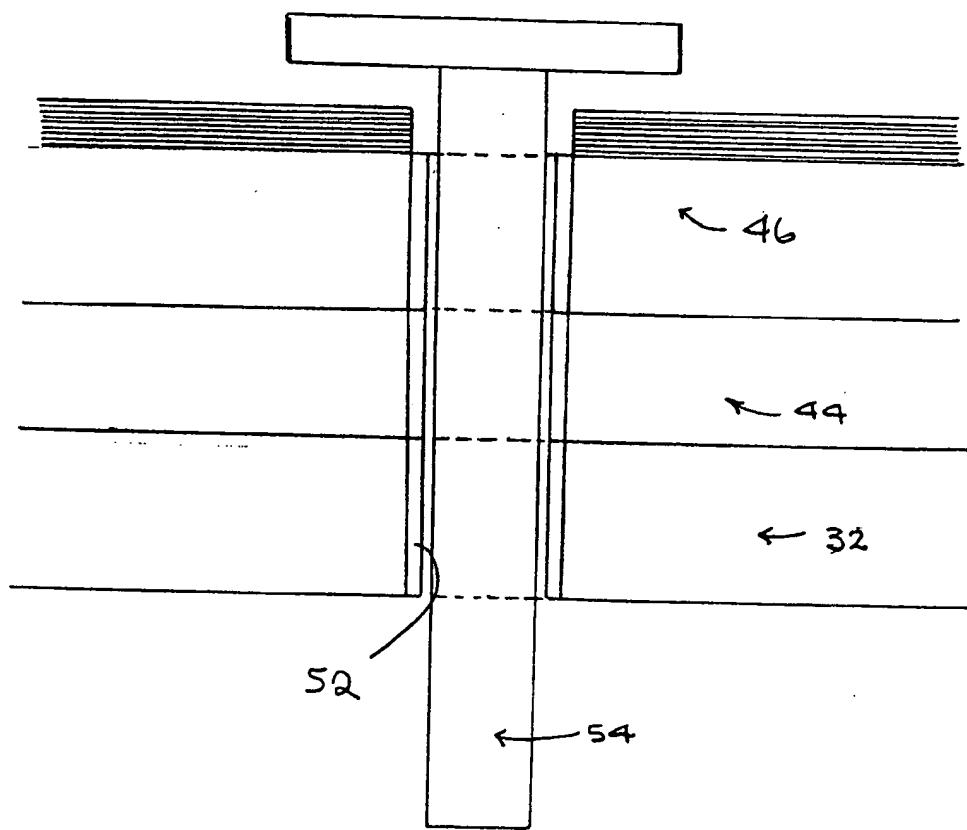


FIGURE 11

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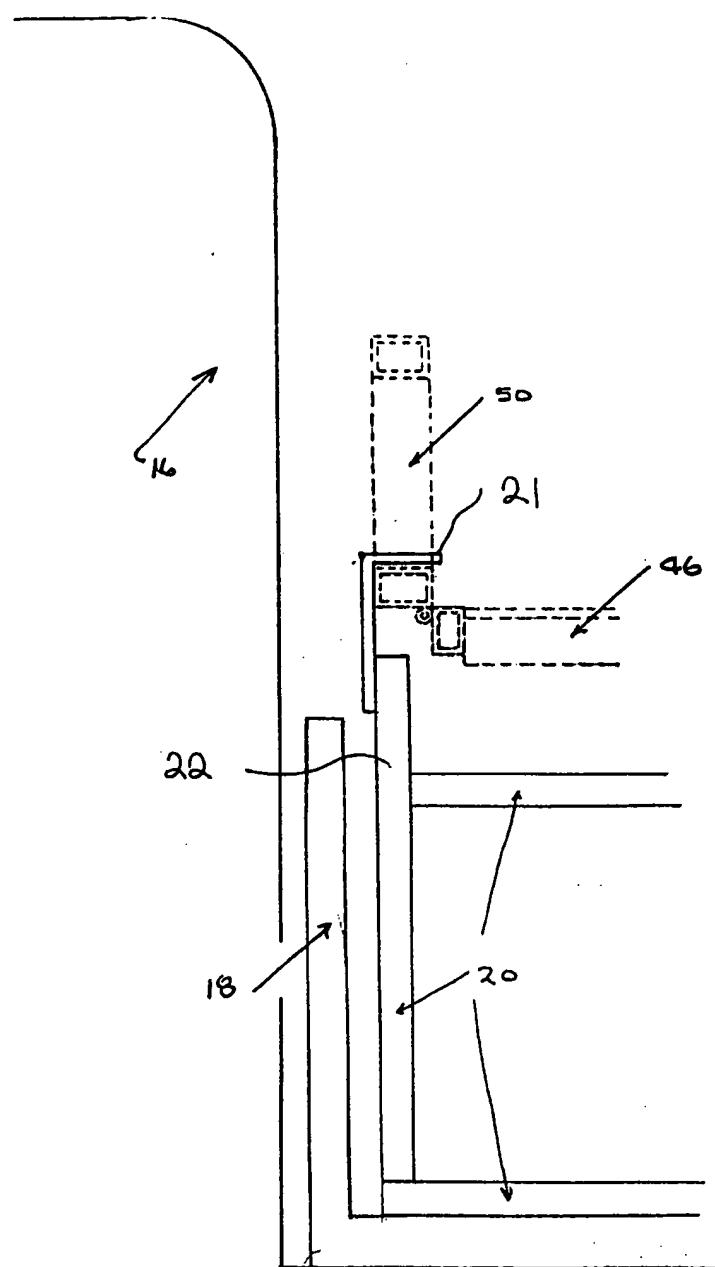


FIGURE 12

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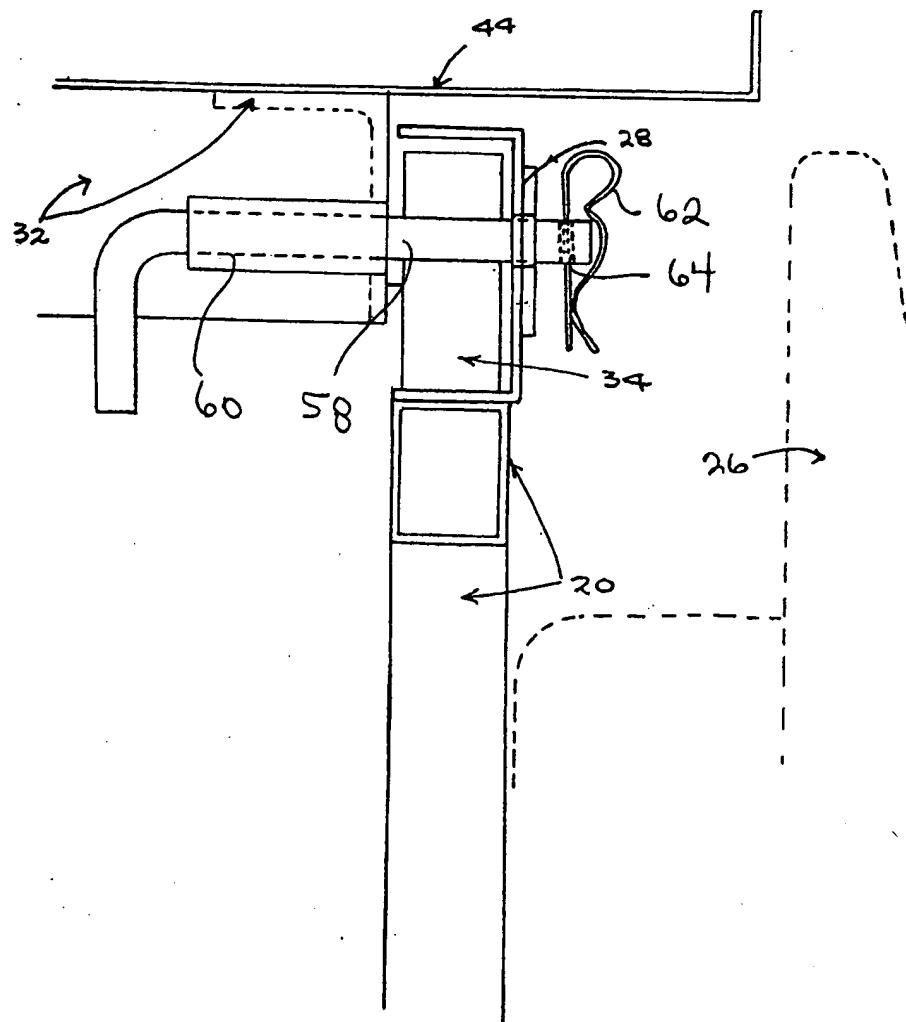


FIGURE 13